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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------------|---------------------|------------------|
| 09/089,871 | 06/04/1998 | RUDOLF CAROLUS MARIA BARENDE | 97253-A | 3289 |

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EXAMINER

RAMIREZ, DELIA M

ART UNIT

PAPER NUMBER

1652

DATE MAILED: 06/13/2002

24

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|----------------------|---------------------|--|
| Office Action Summary | Applicant No. | Applicant(s) | |
| | 09/089,871 | BARENDE ET AL. | |
| Examiner | Art Unit | | |
| Delia M. Ramirez | 1652 | | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 04 April 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 18-28,31-35,39 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 18-28,31-35,39 and 40 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>23</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

Claims 18-28,31-35,39 and 40 are pending.

It is noted that the examination of the instant application has been assigned to a different Examiner in Group Art Unit 1652.

Applicant's submission of a supplemental IDS in Paper No. 23, filed on 6/11/2002 is acknowledged.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

Claim Objections

1. Claim 40 is objected to because of the following informalities: for clarity, it is suggested that the lists corresponding to derivatised celluloses and edible oils be indicated by inserting "(a)" and "(b)" before the terms "derivatised cellulose" and "edible oil", respectively. An alternative is to place a comma after the term "hydroxy-ethyl-cellulose". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1652

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 18-19, 26-28, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Jacobsen et al. (WO 92/12645, August 6, 1992).

4. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

5. Applicants argue that the line of reasoning used by the Examiner to combine the teachings of Nielsen et al. and Jacobsen et al. is not correct. Furthermore, Applicants argue that one of skill in the art would have not been motivated to combine the teachings of both references. Applicants assert that the main teachings of Nielsen et al. and Jacobsen et al. are not directed to the invention of the instant application and that the teachings related to the instant invention are only a minor peripheral part of their teachings. Applicants submit that the process limitations steps set out in the claims should be read in the claims.

6. Applicant's arguments have been fully considered but are not deemed persuasive to overcome the rejection. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one of ordinary skill in the art would have been motivated to add an edible carbohydrate polymer, as taught by Jacobsen et al., to the phytase-containing granulate of Nielsen et al. because the addition of an edible carbohydrate increases the nutritional value of the phytase-containing granulate. Furthermore, as Nielsen et al. clearly teaches that the phytase disclosed has use in animal feeds and can be provided in such feeds in granulated form, one of skill in the art would have looked to other disclosures of animal feed granulates for teachings of how to prepare phytase-containing granules. As such, one would have been motivated to combine the teachings of Jacobson et al. as Jacobson et al. is just such a disclosure of animal feed enzyme granules.

In regard to Applicant's arguments that the teachings of Nielsen et al. and Jacobsen et al. used in the instant rejection are "peripheral" to the subject matter of the references, it is not clear how one can disregard information simply because it is "peripheral" to the subject matter discussed.

In regard to the arguments that the process limitations steps should be read in the claims, it is noted that the claims are drawn to products which can be made by other processes. It is settled case law that the patentability of a product recited in product-by-process format is determined only by the characteristics of the product (see MPEP § 2113). In the instant case, one of skill in the art would have a reasonable expectation of success at making a phytase-

containing granulate of 10000 FTU/gram, as taught by Nielsen et al., comprising 2-40% cellulose (edible carbohydrate polymer), because Jacobsen et al. shows that enzyme-containing granulates wherein the granulates contain up to 40% cellulose can be used in animal feeds. Therefore, the teachings of Jacobsen et al. and Nielsen et al. render the invention as a whole obvious to one of ordinary skill in the art.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Jacobsen et al. (WO 92/12645, August 6, 1992).

8. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

9. Applicants argue that claims 18 and 19 are patentable in view of the arguments set forth above, therefore claim 20, being dependent on claim 19, is also patentable for those same reasons.

10. Applicant's arguments have been fully considered but are not found persuasive to overcome the rejection. One of ordinary skill in the art would have been motivated to add calcium or magnesium to an animal feed for the same reasons discussed above in regard to the addition of an edible carbohydrate. Therefore, the teachings of Jacobsen et al. and Nielsen et al. render the invention as a whole obvious to one of ordinary skill in the art.

11. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Jacobsen et al. (WO 92/12645, August 6,

1992) as applied to claim 19 above and further in view of Markussen et al. (US Patent No. 4,106,991, August 15, 1978).

12. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

13. Applicants argue that for the reasons set forth above, claim 19 is patentable, therefore claims 21-23 dependent thereon, are similarly patentable over the combination of the three references. Furthermore, Applicants argue that the teachings of Markussen et al. are irrelevant to the patentability of claims 21-23 if claim 19 is patentable.

14. Applicant's arguments have been fully considered but are not persuasive to overcome the rejection. For the reasons stated above, claim 19 is unpatentable over Nielsen et al. in view of Jacobsen et al. Furthermore, one of skill in the art would have been motivated to combine the teachings of Nielsen et al. and Jacobsen et al. as discussed above with the teachings of Markussen et al. for the benefit of providing a binding agent for the formation of granulates.

In regard to the arguments that the process limitations steps should be read in the claims, it is noted that the claims are drawn to products which can be made by other processes. In the instant case, one of skill in the art would have a reasonable expectation of success at making a phytase-containing granulate of 10000 FTU/gram, as taught by Nielsen et al., comprising 2-40% cellulose (edible carbohydrate polymer), as taught by Jacobsen et al., which comprises carboxymethyl cellulose, because Markussen et al. teaches the production of enzyme-containing granulates with carboxymethyl cellulose. Therefore, the teachings of Jacobsen et al., Nielsen et al. and Markussen et al. render the invention as a whole obvious to one of ordinary skill in the art.

15. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Jacobsen et al. (WO 92/12645, August 6, 1992).

16. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

17. Applicants argue that claim 19 is patentable over the prior art of record for the reasons set forth above. Therefore, claim 24 dependent thereon, is similarly patentable over Nielsen et al. and Jacobsen et al.

18. Applicant's arguments have been fully considered but are not persuasive to overcome the rejection. Claim 19 is unpatentable over Nielsen et al. in view of Jacobsen et al. for the reasons discussed above. Furthermore, one of skill in the art would have been motivated to add a xylan-endo-1,3- β -xylosidase and endo-1,6- β -glucanase, as taught by Nielsen et al., to the phytase-containing granulate, as taught by Nielsen et al. in view of Jacobsen et al., because proteolytic enzymes can aid in the digestion and nutritional value of the phytase-containing granulates.

In regard to the arguments that the process limitations steps should be read in the claims, it is noted that the claims are drawn to products which can be made by other processes. In the instant case, one of skill in the art would have a reasonable expectation of success at making a phytase-containing granulate of 10000 FTU/gram comprising xylan-endo-1,3- β -xylosidase and endo-1,6- β -glucanase, as taught by Nielsen et al., comprising 2-40% cellulose (edible carbohydrate polymer), as taught by Jacobsen et al., because Nielsen et al. teaches phytase-containing granulates comprising xylan-endo-1,3- β -xylosidase and endo-1,6- β -glucanase.

Therefore, the teachings of Jacobsen et al. and Nielsen et al. render the invention as a whole obvious to one of ordinary skill in the art.

19. Claims 19, 21, 22, 25, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Rokey et al. (US Patent No. 5480673, January 2, 1996).

20. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

21. Applicants argue that claim 19 is patentable over the prior art of record. Furthermore, Applicants assert that one of skill in the art would have not been motivated to combine the teachings of Nielsen et al. and Rockey et al. Applicants argue that the process limitations of claim 19 are not taught by Nielsen et al. or Rockey et al. Thus, one of skill in the art is unable to achieve the granulate of claim 19. Therefore, claim 25, dependent thereon, is similarly patentable over a combination of Nielsen et al. and Rokey et al.

22. Applicant's arguments have been fully considered but are not found persuasive to overcome the rejection. Claim 19 is unpatentable over Nielsen et al. in view of Jacobsen et al. as discussed previously. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

1992). In this case, one of ordinary skill in the art would have been motivated to add an edible carbohydrate polymer, such as corn starch, and soy oil to an animal feed, as taught by Rokey et al., to the phytase-containing granulate of Nielsen et al. because the addition of corn starch and soy oil increase the nutritional value of the phytase-containing granulate.

In regard to the arguments that the process limitations steps are not taught by any of the references cited, it is noted that the claims are drawn to products which can be made by other processes. In the instant case, one of skill in the art would have a reasonable expectation of success at making a phytase-containing granulate of 10000 FTU/gram, as taught by Nielsen et al., comprising an edible carbohydrate polymer, such as corn starch, and soy oil, because Rokey et al. shows that corn and soy oil can be used in animal feeds. Therefore, the teachings of Rockey et al. and Nielsen et al. render the invention as a whole obvious to one of ordinary skill in the art.

23. Claims 18 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Jacobsen et al. (WO 92/12645, August 6, 1992).

24. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

25. Applicants argue that claim 18 is patentable for the reasons set forth above, therefore, claims 31-35 dependent thereon, are also patentable.

26. Applicant's arguments have been fully considered but are not persuasive to overcome the rejection. Claim 18 is unpatentable over Nielsen et al. in view of Jacobsen et al. for the reasons

discussed above. Furthermore, one of skill in the art would have been motivated to include phytase-containing granules of 10000 FTU/gram comprising 2-40% cellulose, as taught by Nielsen et al. in view of Jacobsen et al., in animal feed or in a feed composition for the benefit of increasing the nutritional value of the animal feed or feed composition since it is known that phytases help in the release of inorganic phosphorous, therefore a feed composition or animal composition containing phytase would not require additional phosphorous.

In regard to the arguments that the process limitations steps should be read in the claims, it is noted that the claims are drawn to products which can be made by other processes. In the instant case, one of skill in the art would have a reasonable expectation of success at adding the phytase-containing granulate of 10000 FTU/gram comprising 2-40% cellulose, as taught by Nielsen et al. in view of Jacobsen et al., to an animal feed or a feed composition because Nielsen et al. teaches that that one can use phytase-containing granulates as animal feed additives. Therefore, the teachings of Jacobsen et al. and Nielsen et al. render the invention as a whole obvious to one of ordinary skill in the art.

27. Claims 21-22, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. (WO 95/28850, November 2, 1995) in view of Jacobsen et al. (WO 92/12645, August 6, 1992) as applied to claim 19 above and further in view of Aulik et al. (US Patent No. 4,959,240, September 25, 1990).

28. This rejection has been discussed in previous Office Action Paper No. 18, mailed on 7/5/2001.

29. Applicants argue that since claim 19 is patentable over Nielsen et al. and Jacobsen et al., the teachings of Aulik et al. are irrelevant. Therefore, claims 21-22, 39 and 40 dependent thereon, are patentable.

30. Applicant's arguments have been fully considered but are not found persuasive to overcome the rejection. Claim 19 is unpatentable over Nielsen et al. in view of Jacobsen et al. as discussed above. Furthermore, one of skill in the art would have been motivated to make a phytase-containing granules of 10000 FTU/gram comprising 2-40% cellulose, as taught by Nielsen et al. in view of Jacobsen et al., further comprising soy oil or canola oil, and hydroxypropylmethyl cellulose, as taught by Aulik et al., to avoid attachment of the phytase-containing material to the processing machinery while making the granulates and to maintain the structural properties of the granules.

In regard to the arguments that the process limitations steps should be read in the claims, it is noted that the claims are drawn to products which can be made by other processes. In the instant case, one of skill in the art would have a reasonable expectation of success at adding soy or canola oil and hydroxypropylmethyl cellulose to the phytase-containing granulate of 10000 FTU/gram comprising 2-40% cellulose, as taught by Nielsen et al. in view of Jacobsen et al., because Aulik et al. teaches that that one can add soy or canola oil and hydroxypropylmethyl cellulose to foodstuff. Therefore, the teachings of Jacobsen et al., Nielsen et al. and Aulik et al. render the invention as a whole obvious to one of ordinary skill in the art.

Conclusion

31. No claim is in condition for allowance.

32. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

33. Applicants are requested to submit a clean copy of the pending claims (including amendments, if any) in future written communications to aid in the examination of this application.

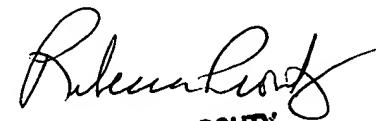
34. Certain papers related to this application may be submitted to Art Unit 1652 by facsimile transmission. The FAX number is (703) 308-4556. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If Applicant submits a paper by FAX, the original copy should be retained by Applicant or Applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delia M. Ramirez whose telephone number is (703) 306-0288. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy can be reached on (703) 308-3804. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Delia M. Ramirez, Ph.D.
Patent Examiner
Art Unit 1652

DR
June 11, 2002


REBECCA E. PROUTY
PRIMARY EXAMINER •
GROUP 1600
111 1600